IN THE CLAIMS

1.(currently amended): An ATM cell service apparatus which accommodates an ATM cell in an optical synchronous communications network through an N.A. (North America) asynchronous communications network, comprising:

an optical synchronous communications network signal terminating unit terminating a signal in an optical synchronous communications network;

an N.A. asynchronous communications network signal terminating unit terminating a signal in an N.A. asynchronous communications network;

first and second ATM cell extraction units respectively extracting an ATM cell from a signal of the optical synchronous communications network and a signal of the N.A. asynchronous communications network;

first and second ATM cell mapping units respectively mapping ATM cells respectively extracted by said first and second ATM cell extraction units in signals of the N.A. asynchronous communications network and the optical synchronous communications network respectively; and

first and second signal transmission units respectively transmitting a signal of the N.A. asynchronous communications network in which the ATM cell is mapped, and a signal of the optical synchronous communications network in which the ATM cell is mapped, wherein

when an ATM cell input from an optical synchronous communications network or an N.A. asynchronous communications network is faulty, said first or second signal transmission unit, respectively, generates an ATM cell exclusively informing that a fault has occurred, and transmits the generated ATM cell.

2.(currently amended): The apparatus according to claim 1, further comprising:

an optical synchronous communications network interface unit connecting a signal for an optical synchronous communications network to an optical synchronous communications network; and

an ATM network interface unit connecting a signal for an optical synchronous communications network to an ATM network without intervening signal processing units.

3.(cancelled)

4.(currently amended): The apparatus according to claim 1, wherein

said extracting second unit extracts an ATM cell from a signal obtained by directly mapping an ATM cell in an N.A. asynchronous communications network signal; and

said first extracting unit extracts an ATM cell from a signal obtained by mapping an ATM cell in a predetermined format in the N.A. asynchronous communications network signal~~, wherein~~

~~an amount of hardware can be reduced by sharing a part of the hardware of said first and second extraction units~~.

5.(currently amended): ~~The apparatus according to claim 4,~~

An ATM cell service apparatus which accommodates an ATM cell in an optical synchronous communications network through an N.A. (North America) asynchronous communications network, comprising:

an optical synchronous communications network signal terminating unit terminating a signal in an optical synchronous communications network;

an N.A. asynchronous communications network signal terminating unit terminating a signal in an N.A. asynchronous communications network;

first and second ATM cell extraction units respectively extracting an ATM cell from a signal of the optical synchronous communications network and a signal of the N.A. asynchronous communications network;

first and second ATM cell mapping units respectively mapping ATM cells respectively extracted by said first and second ATM cell extraction units in signals of the N.A. asynchronous communications network and the optical synchronous communications network respectively; and

first and second signal transmission units respectively transmitting a signal of the N.A. asynchronous communications network in which the ATM cell is mapped, and a signal of the optical synchronous communications network in which the ATM cell is mapped,

wherein

said extracting second unit extracts an ATM cell from a signal obtained by directly mapping an ATM cell in an N.A. asynchronous communications network signal; and

said first extracting unit extracts an ATM cell from a signal obtained by mapping an ATM cell in a predetermined format in the N.A. asynchronous communications network signal, wherein

an amount of hardware can be reduced by sharing a part of the hardware of said first and second extraction units, and

wherein

said predetermined format is a PLCP (Physical Layer Convergence Protocol).

6.(cancelled)

7.(currently amended): A method of providing an ATM cell service in which an ATM cell is accommodated in an optical synchronous communications network through an N.A. (North America) asynchronous communications network, comprising:

(a) terminating a signal in an optical synchronous communications network;

(b) terminating a signal in an N.A. asynchronous communications network;

(c) extracting an ATM cell from one of a signal of the optical synchronous communications network and a signal of the N.A. asynchronous communications network;

(d) mapping the ATM cell extracted in step (c) in a signal of the other of N.A. asynchronous communications network and the optical synchronous communications network; and

(e) transmitting a the signal a in which the ATM cell is mapped, wherein

when an ATM cell input from one of an optical synchronous communications network and an N.A. asynchronous communications network is faulty, an ATM cell exclusively informing that a fault has occurred, is generated, and the generated ATM cell is transmitted in said step (e).

8.(previously presented): The method according to claim 7, further comprising:

(f) connecting a signal for an optical synchronous communications network to an optical synchronous communications network; and

(g) connecting a signal for an optical synchronous communications network to an ATM network without intervening signal processing units.

9.(original): The method according to claim 7, wherein

said step (c) comprises:

(h) extracting an ATM cell from a signal obtained by directly mapping an ATM cell in an N.A. asynchronous communications network signal; and

(i) extracting an ATM cell from a signal obtained by mapping an ATM cell in a predetermined format in the N.A. asynchronous communications network signal.

10-11.(cancelled)